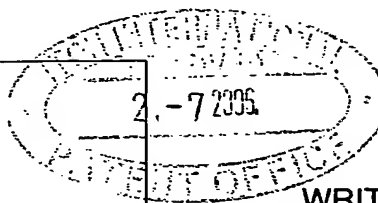


PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY



PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2005/018209

International filing date (day/month/year)
26.09.2005

Priority date (day/month/year)
30.09.2004

International Patent Classification (IPC) or both national classification and IPC
G11B7/0045, G11B19/20

Applicant
RICOH COMPANY, LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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10/580235

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/018209

1AP20 Rec'd PCT/PTO 23 MAY 2006

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/018209

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 1-16

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☒ no international search report has been established for the whole application or for said claims Nos. 1-16
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
- ☐ See separate sheet for further details

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/018209

Box No. V Reasoned statement under Rule 43*b*/s.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-16
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-16
Industrial applicability (IA)	Yes: Claims	1-16
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/JP2005/018209

Re Item III.

The application does not meet the requirements of Article 6 PCT, because claims 1-16 are not clear. The independent claims 1 and 9 use vague and unclear expressions (which are also used in the description of the application), leaving the reader in doubt as to the meaning of the technical features to which they refer.

The expression "recording velocity" (cl. 1, l. 8 and cl. 9, l.12) has been understood as the velocity of the disk (linear or angular) set and controlled at the time of starting writing information to the disk (cl.1 l.9 and cl.9, l.12-13). Next, the following parts of the claims (cl.1, l.9-11 and cl.9, l.13-15) saying: "when the write once of information is carried out on the optical disk where the write once or rewriting can be carried out..." is totally unclear. It is not understood how can be suggested first writing of the write once information on the write once disk, and then teaching that write once or rewriting can be carried out on the same disk.

Therefore the search was performed on the claims in the light of the description (page 18-22 and figures 5,6).

According to the first embodiment of the application (pages 18-22 of the description, with references to figures 5 and 6), there is described a method of recording information onto the optical disk. As it was understood from the description and figures 5, 6 after starting the recording procedure (Step S1-1) according to the method in step S1-2, the type of the disk is being sensed as write once type (YES path) or re-writable (NO path) and then, according to the result it is proceeded further with performing an Optical Power Calibration procedure adequate for the sensed medium, and the recording of data starts with controlling the rotation of the medium with Constant Linear Velocity (CLV), when the medium was sensed in step S1-2 as the write-once type, or the rotation is controlled with Constant Angular Velocity (CAV), if the medium was detected as re-writable type. The method according to figure 6 differs from the previous one in that the set Constant Linear Velocity of the rotating medium (step 2-4) is set to the lowest linear velocity, which could be lower than linear velocity used during performing of power calibration (step 2-3). In another embodiment, according to figure 7, after sensing in step S3-2 medium as write-once type, an additional checking procedure is implemented which calculates whether the radial distance between the place where recording is to be started and the

starting location for recording on the medium is within the range, and if yes, the CAV is used, otherwise CLV controls rotation as in the method of fig.5, 6.

Re Item V.

1 Reference is made to the following document:

D1: EP-A-0 779 621 (FUJITSU LIMITED) 18 June 1997 (1997-06-18)

D2: US 2002/141308 A1 (MATSUMOTO KEISHI) 3 October 2002 (2002-10-03)

2 The application does not meet the requirements of Article 6 PCT, because claims 1 and 9 are not clear, and therefore all claims which are dependent on these independent claims 1 and 9 are neither clear.

2.1 The way in which claim 1 is formulated, in particular in its second part (lines 8-13), makes it impossible to understand the features for which the scope of protection could be clearly defined.

2.2 Similarly, the same objection applies to claim 9, in particular for lines 11-16 of the claim.

2.3 As a consequence the search performed by the search division was based on the description of the application.

3 Furthermore, the above-mentioned lack of clarity notwithstanding, the subject-matter of claims 1-16 does not involve an inventive step in the sense of Article 33(3) PCT, and therefore the criteria of Article 33(1) PCT are not met.

- 3.1 The document D1. is regarded as being the closest prior art to the subject-matter of the application, and discloses (the references in parentheses applying to this document):

An optical disk apparatus and method according to which the switching control, selection information of the CLV control and the CAV control is previously registered in accordance with the kind of medium and the CLV control or the CAV control is selected in accordance with the corresponding selection information obtained from the detection result of the medium.

- 3.2 The subject-matter of the application therefore differs from this known D1 in that: There is no writing information performed on the disk detected as CD and therefore no power control is implemented in dependancy to the detected sort of recording medium.

- 3.3 The problem to be solved by the present invention may therefore be regarded as How to properly control applied recording power of the laser beam at the beginning of recording on the write-once optical medium, when no earlier recording of data was performed on this medium.

- 3.4 The solution proposed in the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

The document D2 shows the apparatus and method of recording information on te optical recording medium in which the recording power is set on a base of trial recording (power calibration) performed in the power calibration area of the disk. Moreover, the control of the disk spin may be performed as constant angular velocity or constant linear velocity, depending on the radial position where recording of information takes place. The skilled person would therefore regard it as a design option to combine the features of the D1 and D2 in order to solve the problem posed.

**WRITTEN OPINION OF THE
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AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/JP2005/018209
